

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

What is claimed is:

Claim 1 (currently amended). A speech-dedicated stable amplifying system to increase speech intelligibility, comprising:

a first amplifying circuit to linearly amplify a first frequency range of an audio signal that substantially comprises first speech formant frequencies,

a second amplifying circuit to linearly amplify a second frequency range of the audio signal that substantially comprises second speech formant frequencies;

the amplification of the first frequency range ~~[[and]]different from~~ the amplification of the second frequency range and to emulate at least one acoustic property of a passive device of a spectral emphasis for the second speech formant frequencies relative to the first speech formant so as to enhance speech intelligibility;

a mixer to combine the first frequency range and the second frequency range into an amplified audio signal; and

an acoustic output device to transmit the amplified audio signal.

Claim 2 (currently amended). The system of claim 1, in which the difference in amplifications between the first and the second speech formant frequencies emulates as the passive device ~~[[comprises-]]~~ one of the group consisting of an individual's ear cupping and an ear trumpet aid.

Claim 3 (original). The system of claim 2, further comprising:

a receiver to receive an input signal and to source therefrom the audio signal of the first and second frequency ranges;

a generator to generate an injection tone;

the mixer to combine the injection tone with the signals of the first and the second frequency ranges amplified by the respective first and the second amplifiers; and the acoustic output device to transmit the amplified audio signal of the first and the second frequency ranges together with the injection tone; and a detector to recover a portion of the injection tone signal feedback and received by the receiver in the input signal; the second amplifier comprising an adjustable gain of a magnitude controlled dependent on the level of the injection tone signal recovered by the detector.

Claim 4 (original). The system according to claim 3, in which the generator is to generate an inaudible signal for the injection tone.

Claim 5 (original). The system according to claim 3, in which

the generator generates the injection signal with a predetermined encoding modulation; and

the detector comprises a demodulation circuit to decode and recover the injection tone signal per the predetermined encoding modulation.

Claim 6 (currently amended). A public announcement system for enhanced speech intelligibility, comprising:

a first amplifier to linearly amplify a first frequency range of an audio signal, the first frequency range substantially of first speech formant;

a second amplifier to linearly amplify a second frequency range of the audio signal, the second frequency range substantially of second speech formant;

the amplification of the first frequency range and the amplification of the second frequency range weighted differently and to emulate at least one acoustic property of a passive device of spectral emphasis for the second speech formant frequencies relative to the first speech formant frequencies so as to enhance the components for speech intelligibility;

a mixer to combine the signal amplified by the first amplifier of the first frequency range and the signal amplified by the second amplifier of the second frequency range into an amplified audio signal; and

an acoustic output device to transmit the amplified audio signal.

Claim 7 (currently amended). The system of claim 6, in which the passive device to be emulated by the emphasis of the second speech formant frequencies comprises one of the group consisting of an individual's hand assisted ear cupping and an ear trumpet.

Claim 8 (currently amended). A method of enhancing speech intelligibility in a public address system, comprising:

receiving an audio signal;

~~[[differentially]]~~ amplifying a first frequency range of the audio signal received that substantially consists of first speech formant frequencies and amplifying a second frequency range of the audio signal received that substantially consists of second formant frequencies of the audio signal, the amplifying of the second frequency range performed differently from the amplifying of the first frequency range to lend emphasis of the second formant frequencies for speech intelligibility;

mixing an injected inaudible signal tone with the audio signal;

sensing a level of the signal tone within the audio signal received; ~~[[and]]~~

controlling a gain for ~~[[amplification]]~~ the amplifying of the second frequency range based on the level of the signal tone sensed; and

~~[[the-]]~~controlling the gain for ~~[[amplification to be]]~~ the amplifying of the second frequency range based on the level sensed, to substantially prevent regenerative oscillation of the audio signal and to amplify the second formant frequencies without creating howling.

Claim 9 (original). The method of claim 8, further comprising modulating the signal tone using at least one of pulse modulation and frequency modulation.

Claim 10 (original). The method of claim 8, wherein the sensing uses at least one of a filter having a phase lock to lock phase with the source signal, a narrow band filter, and an amplitude demodulator.

Claim 11 (original). The method of claim 8, further comprising sensing a change in at least one environmental variable, wherein the controlling the gain for the amplification is further based on the sensed change.

Claim 12 (original). The method of claim 11, wherein the sensed change is based on the signal tone.

Claim 13 (currently amended). The method of claim 8, wherein the ~~[[differentially amplifying]]~~difference in the performing of the amplifying of the first frequency range and the amplifying of the second frequency range emulates at least one acoustic property of a passive device.

Claim 14 (currently amended). The method of claim ~~[[§]]13~~, wherein the ~~[[differentially amplifying to]]~~difference in the performing of the amplifying of the first frequency range and the amplifying of the second frequency range emulates at least one acoustic property of a passive device of the group consisting of an ear cupping and an ear trumpet.